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FIG 1

SMEZ	-----	-----	LEVDNNNSLIR	NIYSTIVYEX	SDTVIDEKNS	30
SMEZ-2	-----	-----	LEVDNNNSLIR	NIYSTIVYEX	SDIVIDESNS	30
SPE-J	-----	-----				
SPE-C	-----	DSKK	DISNVKSDIL	YATITPYDY	KDCRVNESIT	34
SPE-G	-----	DE	NLKDLKRSR	FAVNITPCDY	ENVEIAEWIT	32
SPE-H	-----	NSYN	TTNRENEESL	YKHDSNLIEA	DSIKNSPDIV	34
SEA	SEKSEEINE	KDLRKKSELQ	GAALGMLRQI	YNEKAKTE	NKESHDQFLQ	49

c2

B1

SMEZ	ENLVTKKLDV	RDAROFFINS	EMDEYAANDE	KDGKRLAMES	VBFDWAYLSE	80
SMEZ-2	ENLVTKKLDV	RDAROFFINS	EMDEYAANDE	KTGKRLAVPS	VBFDWAYLSK	80
SPE-J	-----	-----	-----	-----	LE.....YIFT	6
SPE-C	ETLNIDTQKY	RG.KYYISS	EMSYEASQRE	KRDADWVVEG	LF.....MILN	79
SpeG	NSIHINTKQK	RSECILYVDS	IVSLGITDQP	IKGKRVWVEG	LE.....MNFS	78
SpeH	TS.HML..KY	.SVRKXNLSV	FFEKDWISQE	FKDKDWDIYA	LSAQEVCE..	78
SEA	ETILFKGFFT	NHSWYNDLLV	DFDSKDIVDK	YKCKWVLYG	AYYGYQCAGG	99

B2

B3

α3

B4

SMEZ	GKVIAT..TY	GMPYQEE..	PMNSKNIEV	WLNRRQIPVE	YEQISTENWTT	127
SMEZ-2	GKVTAT..TY	GMPYQKT..	SILKNIEV	WLNNGKQISVE	YNEBISTENWTT	127
SPE-J	RYDVYH..IV	GVWPSVNSN.	SENSKIVG	WLTGCVQKTL	LPYKID..PI	54
SPE-C	SHTGEY..IV	GTMPAQN.N.	KVNEKLLG	WFGESQQNL	NKQKILEBDI	126
SPE-G	PPYVDN..IV	GTWVHSNQG.	NKSLQFVGIL	NQDGCTETYL	SEAVRINKQ	126
SPE-H	CPGKRAEAF	GMLTNSER.	.KEIKVWVNV	WDKSKRQ..P	PMF TVWPK	124
SEA	TPNKTACMV	GVNLHDNNRL	TEKKVVEIN	WLD KONTW	LETVKTEJKN	149

B5

B6

B7

B8

SMEZ	VIAQEDDLRV	KFPIISQHQL	SSGSSYKSG	KPVFHNDNS	DKYSLDITYV	177
SMEZ-2	VIAQEDDLRV	KFPIIAQHQL	SSGSSYKSG	KIVFHANDNS	DKYSPDITYV	177
SPE-J	FTIOPEDPSKI	QYIMQTYKRI	DPNSPYIKG	QIEIAINGNK	.HESPNLYDA	103
SPE-C	VIAGEDPSKI	KYIMMDNYKRI	DATSPYVSG	RIEICGDRGK	.HEQIDWDS	175
SPE-G	FTIOPEDPSKI	KFPIIMEKQD	DSESRYSYSG	SIFLAKDSK	.HYEVWENK	175
SPE-H	VIAQEDDLRV	KLPIIKQD	NNR..EQKY	SKGTVLDLN	SGKDIVFDLY	172
SEA	VIQDQEDLQA	RYEQEKYNL	NSDVFDGKV	QRGLIVFHTS	TEPSVNYDLF	199

B9

α4

B9

B10

SMEZ	..GYRDKEST	ERKVYHD	BSF	WIDKIGHLDI	EIDS	209
SMEZ-2	..GYRDKEST	ERKVYHD	BSF	WIDKIGHLDI	EIDS	209
SPE-J	TSS..STRSDH	ERKVYHD	BSF	WMKDFSHFDI	YWTK	137
SPE-C	PNE..GTRSDH	ERKVYHD	BSF	WMKNFSHFDI	YEK	208
SPE-G	DDKLLSRDHF	ERKVYHD	BSF	WSEEISHFDI	YKTH	210
SPE-H	YFGNGDFNSM	LRKYSN	ERK	DSTQFHVQV	SIS	204
SEA	GAQGQNSNTL	LRKYSN	ERK	WSENWHDIT	WYTS	233

α5

B11

B12

PIG 2

10

30

50

ATGAAAAAAACAAAACCTTATTTTCTTTACTCAATATTCAATTGCAATAATTCTCGT
 M K K T K L I F S F T S I F I A I I S R

70

90

110

CCTGTGTTGGATTAGAAGTAGATAATAATTCCCTCTAAGGAATATCTATAGTACGATT
 P V F G L E V D N N S L L R N I Y S T I

130

150

170

GTATATGAATATTCAAGATATAGTAATTGATTTAAAACCACTCATAACTTAGTGACTAAG
 V Y E Y S D I V I D F K T S H N L V T K

190

210

230

AAACTTGATGTTAGAGATGCTAGAGATTCTTTATTAACTCCGAAATGGACGAATATGCA
 K L D V R D A R D F F I N S E M D E Y A

250

270

290

GCCAAITGATTTAAAACGGAGATAAAATAGCTGTGTTCTCCGTCCCATTGATTGGAAC
 A N D F K T G D K I A V F S V P F D W N

310

330

350

TATTTATCAAAAGGAAAAGTCACAGCATATACCTATGGTGGAAATAACACCCCTACCAAAAA
 Y L S K G K V T A Y T Y G G I T P Y Q K

370

390

410

ACTTCAATACCTAAAAAtatccCTGTTAATTGatTAatGgAAAGcagatCTCTgtT
 T S I P K N I P V N L W I N G K Q I S V

430

450

470

CcTtaCaaCGAAATATCaaCTAACAAACaacaGTTACAGCTCAAGAAAttgATCTAAAG
 P Y N E I S T N K T T V T A Q E I D L K

490

510

530

GTTAGAAAATTTTAATAGCACACATCAATTATATTCTTCTGGTTCTAGCTACAAAGT
 V R K F L I A Q H Q L Y S S G S S Y K S

550

570

590

CGTAGACTGGTTTCATACAAATGATAATTCAAGATAAAATATTCTTCTGatCTTTctat
 G R L V F H T N D N S D K Y S F D L F Y

610

630

650

gtagGATATAGAGATAAAAGAAAGTATCTTAAAGTATACAAAGACAATAAAATCTTCAAT
 V G Y R D K E S I F K V Y K D N K S F N

670

690

ATAGATAAAATTGGCATTAGATATAGAAATTGACTCCTAA
 I D K I G H L D I E I D S *

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SPE-G

FIG 3

10	30	50
ATGAAAACAAACATTTGACAATTATCATATTATCATGTGTTTTAGCTATGGAAGTCAA		
M K T N I L T I I I L S C V F S Y G S Q		
70	90	110
TTAGCTTATGCAGATGAAAATTAAAAGATTAAAAAGAAGTTAAGATTTGCCTATAAT		
L A Y A D E N L K D L K R S L R F A Y N		
130	150	170
ATTACCCCAGCGATTATGAAAATGTAGAAATTGCATTTGTTACTACAAATAGCATACT		
I T P C D Y E N V E I A F V T T N S I H		
190	210	230
ATTAATACTAAACAAAAAGATCGGAATGTATTCTTATGTTGATTCTATTGTATCTTA		
I N T K Q K R S E C I L Y V D S I V S L		
250	270	290
GGCATTACTGATCAGTTATAAAAGGGATAAGGTCGATGTTGGTCTCCCTTATAAT		
G I T D Q F I K G D K V D V F G L P Y N		
310	330	350
TTTCCCCACCTTATGTAGATAATATTATGGTGGTATTGTAAAACATTGAATCAAGGA		
F S P P Y V D N I Y G G I V K H S N Q G		
370	390	410
AATAAAATCATTACAGTTGAGAAATTTAAATCAAGATGGAAAGAAACTTATTTGCC		
N K S L Q F V G I L N Q D G K E T Y L P		
430	450	470
TctgAGGCTGTTCGATAAAAAGAAACAGTTACTTACAGGAATttgATTTAAAATA		
S E A V R I K K Q F T L Q E F D F K I		
490	510	530
AGAAAATTTCTAATGGAAAATACAATATCTATGATTGGAATCGCGTTATACATCGGG		
R K F L M E K Y N I Y D S E S R Y T S G		
550	570	590
AGCCTTTCCCTGCTACTAAAGATAGTAAACATTATGAAGTTGATTTATTAATAAGGAT		
S L F L A T K D S K H Y E V D L F N K D		
610	630	650
GATAAGCTTTAAGTCGAGACAGTTCTTAAAGGTATAAGATAATAAGATTTTAAT		
D K L L S R D S F F K R Y K D N K I F N		
670	690	
AGTGAAGAAATTAGTCATTTGATATCTACTAAAAACGCACTAG		
S E E I S H F D I Y L K T H *		

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SPE-H

FIG 4

10

30

50

ATGAGATATAATTGTCGCTACTCACATATTGATAAGAAAAATCTACAGCATGATTATATGT
 M R Y N C R Y S H I D K K I Y S M I I C

70

90

110

TTGTCATTTCTTTATATTCAAATGTTGTTCAAGCAAATTCTTATAATACAACCAATAGA
 L S F L L Y S N V V Q A N S Y N T T N R

130

150

170

CATAATCTAGAATCGCTTTATAAGCATGATTCTAACTTGATTGAAGCCGATAGTATAAAA
 H N L E S L Y K H D S N L I E A D S I K

190

210

230

AATTCTCCAGATATTGTAACAAGCCATATGTTGAAATATAGTGTCAAGGATAAAAATTG
 N S P D I V T S H M L K Y S V K D K N L

250

270

290

TCAGTTTTTTTGAGAAAGATTGGATATCACAGGAATTCAAAGATAAAGAAGTAGATATT
 S V F F E K D W I S Q E F K D K E V D I

310

330

350

TATGCTCTATCTGCACAAGAGGTTGTGAATGTCCAGGGAAAAGGTATGAAGCGTTtgg
 Y A L S A Q E V C E C P G K R Y E A F G

370

390

410

GGAATTACATTAACTAATTCAAGAAAAAAAAGAAATTAAAGTTCTGTAAACGTgtGggat
 G I T L T N S E K K E I K V P V N V W D

430

450

470

AAAAGTAAACAAACAGCCGCCTATGTTATTACAGTCAATAAACCGAAagtaaCCGCTCAG
 K S K Q Q P P M F I T V N K P K V T A Q

490

510

530

GAAGTGGATATAAAAGTTAGAAAGTTATTGAttaagaaatacgATATCTATAATAaccgg
 E V D I K V R K L L I K K Y D I Y N N R

550

570

590

gaacaaaaatactctaaaggaactgttaccttagATTTAAATTCAAGGTAAAGATATTGTT
 E Q K Y S K G T V T L D L N S G K D I V

610

630

650

TTTGATTGTATTATTTGGCAATGGAGACTTTAATAGCATGCTAAAATATATTCCAAT
 F D L Y Y F G N G D F N S M L K I Y S N

670

690

710

AACGAGAGAATAAGactcaactCAATTTCATGTAGatgTGTCAatcagctaA
 N E R I D S T Q F H V D V S I S *

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SPE-J (partial)

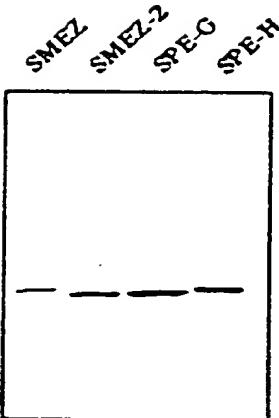
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FIG 5

10 30 50
CTTCCGTACATATTACTCGTTATGATGTTATTATATATGGTGGGGTACACCATCA
L P Y I F T R Y D V Y Y I Y G G V T P S
70 90 110
GTAAACAGTAATTGGAAAATAGTAAATCTAGGTAAATTACTAATAGATGGAGTCAG
V N S N S E N S K I V G N L L I D G V Q
130 150 170
CAAAAAACACTAATAAAATCCCATAAAAATAGATAAACCTATTTTACGATTCAAGAATT
Q K T L I N P I K I D K P I F T I Q E F
190 210 230
GACTTCAAAATCAGACAATATCTTATGCAAACATACAAAATTATGATCCTAATTCTCCA
D F K I R Q Y L M Q T Y K I Y D P N S P
250 270 290
TACATAAAAGGGCAATTAGAAATTGCGATCAATGGcaATAAACATGAAAGTTTAACCTTA
Y I K G Q L E I A I N G N K H E S F N L
310 330 350
TATGATGCAACCTCATCTAGTACAAGGAGTGTATTTAAAAAATATAAGACaATAAG
Y D A T S S S T R S D I F K K Y K D N K
370 390 410
ACTATAAAATATGAAAGATTCAGCCATTGATATTACCTTtggACTAAATAA
T I N M K D F S H F D I Y L W T K *

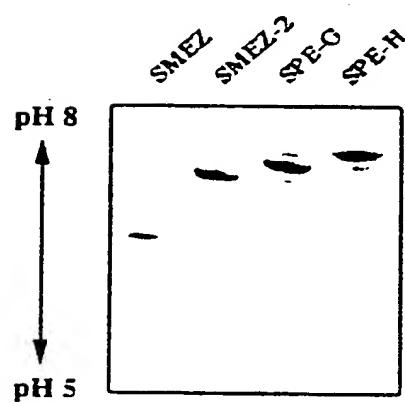
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FIG 6

A

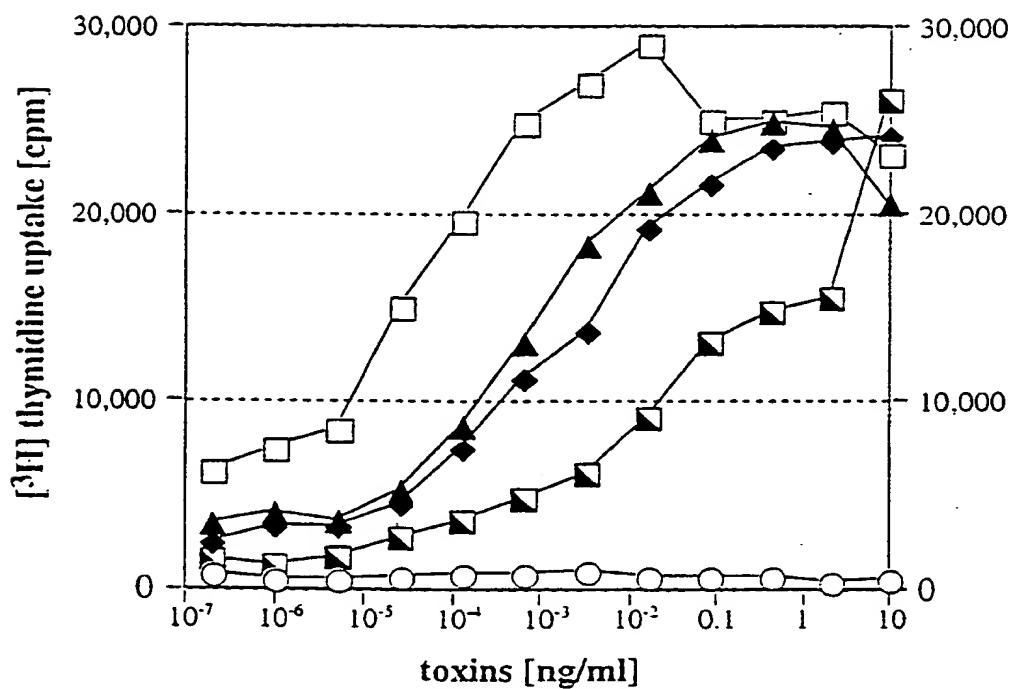


B



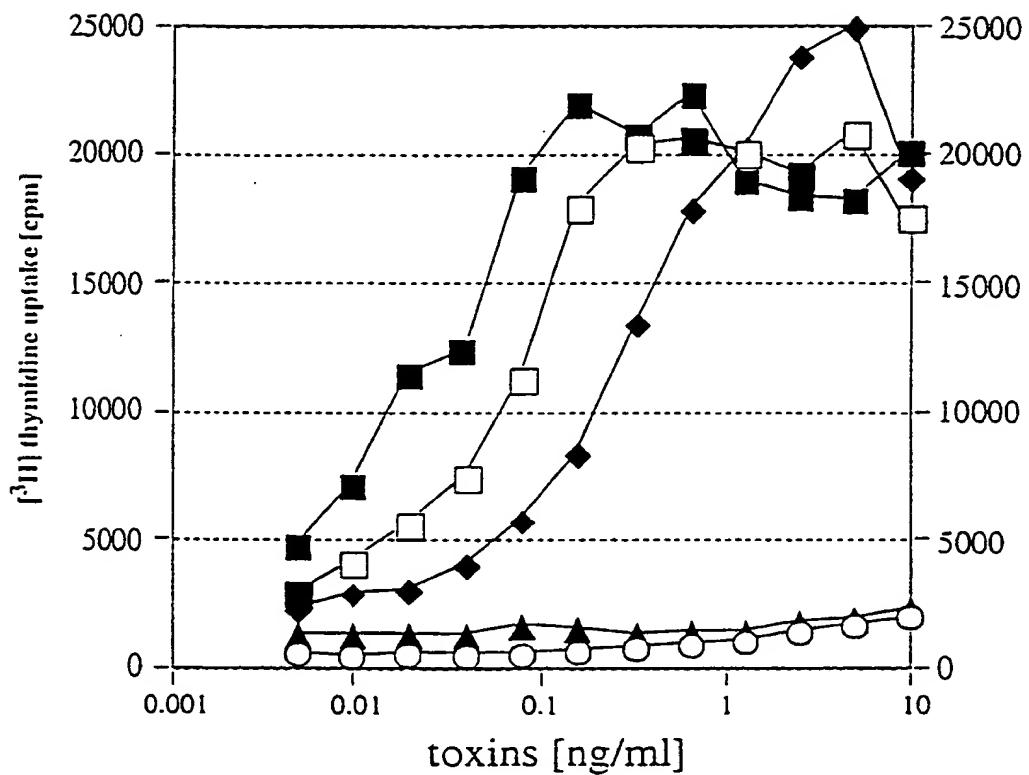
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FIG 7



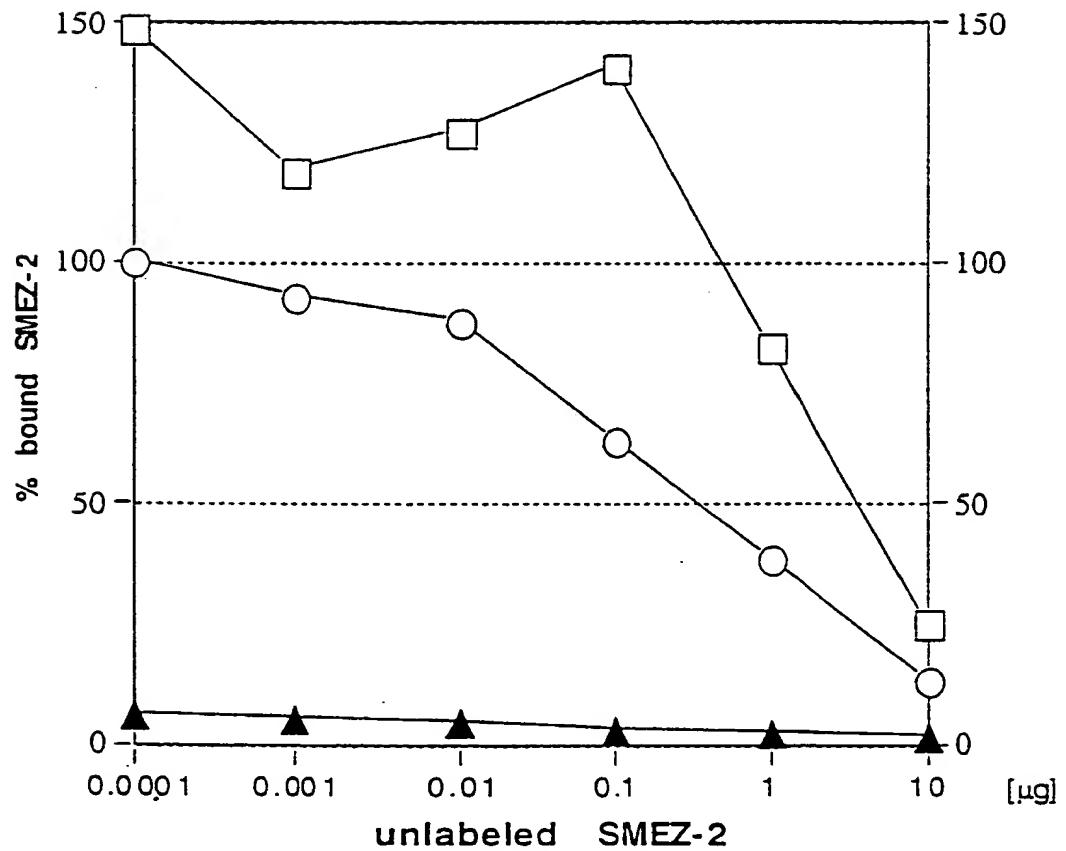
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FIG 8



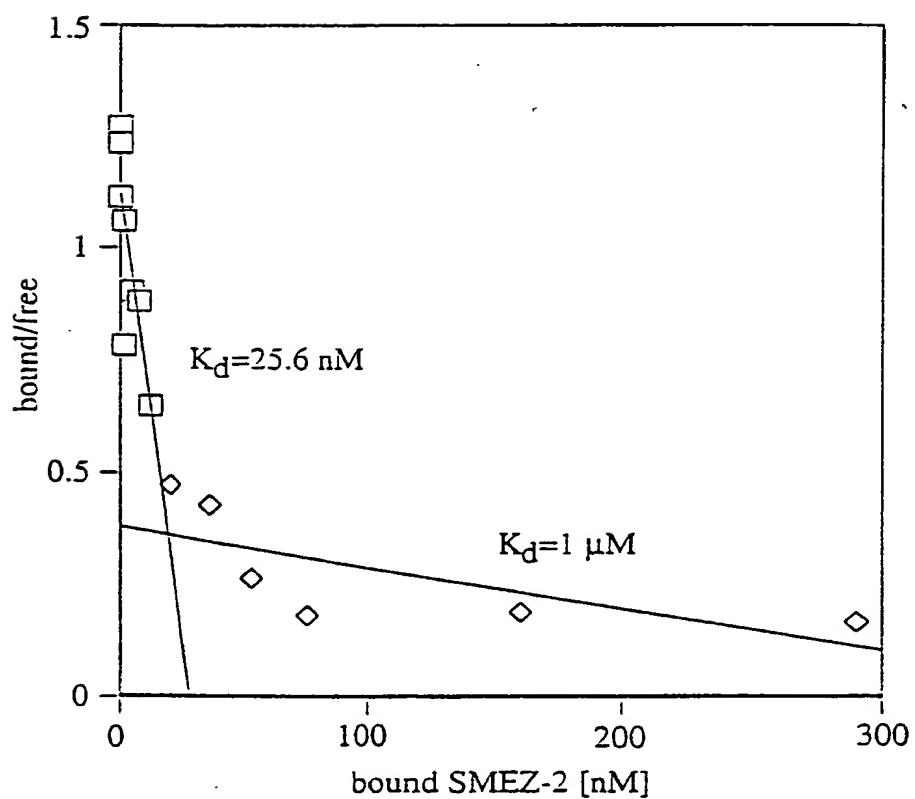
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FIG 9



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FIG 10



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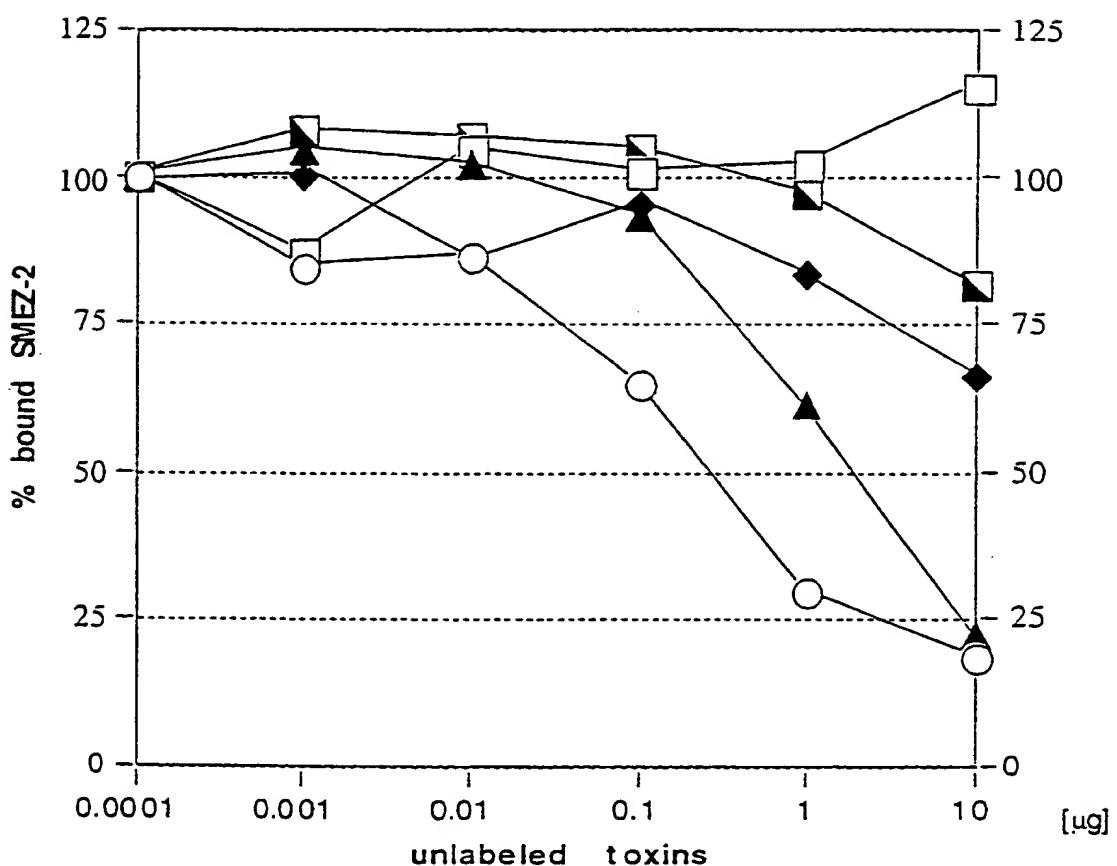
FIG 11

unlabeled toxins

	SMEZ	SMEZ-2	SPE-G	SPE-H	SEB	TSST	SEA	SPE-C
SMEZ	█	█	□	□	□	□	█	████
SMEZ-2	█	█	□	□	□	□	█	□
SPE-G	█	████	█	□	□	□	████	████
SPE-H	█	█	□	█	□	□	█	█
SEB	□	□	□	□	█	□	████	□
TSST	████	████	□	□	□	█	█	████
SEA	□	████	□	████	□	□	█	□
SPE-C	████	□	□	□	□	□	█	█

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FIG 12



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FIG 13

